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March 3, 1998

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

RE: New Patent Application in U.S.
Yuzo KIKUCHI
Atty's Docket: KIKUCHI=2

Sir:

Transmitted herewith is a patent application entitled
FABRIC FOR WELDING. The inventor is Yuzo KIKUCHI.

Attached are the specification (12 pages), including 12
claims (1 independent) and an abstract, plus 8 sheets of drawings
(Figures 1-9), and a return postcard. In accordance with 37 CFR
1.53(a) and (b), it is respectfully requested that a serial number
and filing date be assigned to this application as of the date of
receipt of the present papers. In accordance with the present
procedures of the U.S. Patent and Trademark Office, an executed
Declaration and the filing fee for the present application will be
filed in due course.¹

¹ No authorization is given for charging the filing fee at the
present time. However, at such time that the declaration is
filed, but not before, you are authorized to charge whatever
excess fees are necessary (including the filing fee and any
extension of time fees then due) to Deposit Account 02-4035,
if any such fees due are not fully covered by check filed at
that time.

In re of KIKUCHI=2

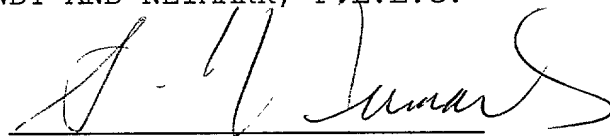
The attorneys of record in this application will be Sheridan Neimark, Reg. No. 20,520; Roger L. Browdy, Reg. No. 25,618; Anne M. Kornbau, Reg. No. 25,884; Norman J. Latker, Reg. 19,963; Iver P. Cooper, Reg. No. 28,005; *Allen C. Yun, Reg. No. 37,971 and Nick Bromer, Reg. No. 33,478 (*Patent Agent). Please send all correspondence with respect to this case to:

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Please direct all telephone calls to Browdy and Neimark at (202) 628-5197.

Respectfully submitted,
BROWDY AND NEIMARK, P.L.L.C.

By



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FABRIC FOR WELDING

FIELD OF THE INVENTION

The present invention relates to a fabric which can be attached by welding to a substrate.

BACKGROUND OF THE INVENTION

Heretofore in welding fabric to a substrate, the fabric used was a belt-form fabric with a special design. As shown in Figure 9A, at least a portion of the belt-form fabric is woven with a coarse weave. Figure 9B illustrates how this fabric T is welded to a substrate in the form of a sheet, S. The coarsely woven portion t is sandwiched between a welding tape M and substrate S and heat-pressed so that the welding tape is melted and flows into the gaps of the coarsely woven portion t. Thus, the fabric T is united with substrate S.

Unfortunately, the conventional fabrics used for welding require that the welding tape M be correctly positioned on the coarsely woven portion of the belt-form fabric T overlapped on the welding zone of the substrate S. This correct positioning is troublesome, and requires considerable expenditure of time and labor.

SUMMARY OF THE INVENTION

It is an object of the present invention to overcome the aforementioned deficiencies of the prior art.

It is another object of the present invention to provide a fabric for welding which can easily be welded to any

type of substrate that can be subjected to hot pressing.

According to the present invention, a fabric for welding is provided which has a welding portion integral with the fabric which extends partially or completely over the width of the fabric. The welding portion of the fabric comprises at least a warp or weft which melts under hot pressing to adhere the fabric to a substrate. The substrate may be a cloth sheet, a synthetic resin sheet, or the like. This enables one to attach the sheet to a column, a stake, a log, a building, a footing, etc., or to attach the welding fabric to another sheet.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a plan view showing a fabric for welding.

Fig. 2 is a sectional view showing how the fabric for welding in Figure 1 is welded to a sheet.

Fig. 3 A is a perspective view showing how the fabric can be welded to a substrate.

Fig. 3 B is another perspective view showing how the fabric can be welded to a substrate.

Fig. 4A is a perspective view showing another embodiment of fabric for welding according to the present invention.

Fig. 4B is another perspective view showing another embodiment of fabric for welding according to the present invention.

Fig. 5 is a perspective view showing a fabric for welding in another embodiment of the present invention.

Fig. 6A shows another embodiment of a fabric for welding according to the present invention.

Fig. 6B shows another embodiment of a fabric for welding according to the present invention.

Fig. 7A is a perspective view of one embodiment of the invention as a three-dimensional fabric for welding.

Fig. 7B is a perspective view of another embodiment of the invention as a three-dimensional fabric for welding.

Fig. 7C is a perspective view of another embodiment of the invention as a three-dimensional fabric for welding.

Fig. 8A is a perspective view of another embodiment of the invention as a three-dimensional fabric for welding.

Fig. 8B is a perspective view of another embodiment of the invention as a three-dimensional fabric for welding.

Fig. 8C is a perspective view of another embodiment of the invention as a three-dimensional fabric for welding.

Fig. 9A shows a conventional belt-form fabric for welding.

Fig. 9B illustrates how the fabric of Figure 9A is welded to a substrate.

DETAILED DESCRIPTION OF THE INVENTION

The fabric for welding according to the present invention can be any type of fabric, including woven or non-woven. The welding portion integral with the fabric can extend

either partially or completely over the width of the fabric. The welding portion of the fabric comprises at least a warp or a weft, or both, which melts under hot pressing to adhere the fabric to a substrate. The substrate may be any substrate which can be subjected to hot pressing, such as a cloth sheet, a synthetic resin sheet, or the like.

The fabric for welding can be in the form of a belt, sheet, or any form of fabric, woven or non-woven. Where the fabric is woven, any type of weave can be used. Examples of types of weaves, which examples are solely for purposes of illustration and are not intended to be limiting, are twill weave, satin weave, plain weave, and the like. Any type of weaving machine can be used to produce the fabric

The welding portion of the fabric can be any type of material which flows under hot pressing conditions to form a seal between the welding fabric and a substrate. The welding portion of the fabric may comprise warp or weft fibers coated with a thermoplastic synthetic resin, such as polyvinyl chloride, which melts under conditions of hot pressing to seal the fabric to a substrate. Alternatively, the warp or weft *per se* can be coated with a thermoplastic synthetic resin which melts under conditions of hot pressing to seal the fabric to a substrate.

Referring to Figure 1, the fabric for welding 1 is in the form of a belt which is twill-woven from warp 1a and weft 1b using a needle loom. In this embodiment, one side of the

fabric for welding is reinforced by chain-knitting an edge thread 1c.

The belt-form fabric for welding 1 is divided width-wise into a welding portion A and a fixing portion B. The warp 1a in the welding portion A is coated with a thermoplastic synthetic resin such as PVC. In this embodiment, only the warp 1a is coated. However, the weft 1b may also be coated, or may be coated instead of the warp 1a, as long as this coating does not adversely affect weaving of the fabric.

When the welding portion A of the fabric for welding 1 is overlapped on the fringe of a substrate S and hot-pressed, the thermoplastic resin around warp 1a melts and flows around between the substrate S and the welding portion A, adhering welding portion A securely to the surface of sheet 1. As a result, the fabric for welding 1 is perfectly welded with substrate S, thus rigidly uniting both members.

Any type of fiber can be used for warp 1a and weft 1b, including spun yarn, filament yarn, and textured yarn. The yarns can be made of any suitable material for making fabrics, including natural fibers, synthetic fibers, and blends thereof.

Where warp 1a comprises a multi-fiber assembly such as spun yarn, multi-filament yarn, or the like, some of the components of the yarn can be fibers coated with a thermoplastic synthetic resin or can be thermoplastic synthetic fibers per se. The weft 1b can also be composed in the same way as the warp 1a.

Figure 3A shows an embodiment of the present invention in which the fixing portion B of the fabric for welding 1 is provided with auxiliary fixing means. In Figure 3A, holes H are bored at a suitable interval in the fixing portion B in the fabric for welding 1 to facilitate fixing the unit to another unit or to a column, etc., using a rope or cord or similar device threaded through the holes.

Figure 3B provides another example of auxiliary fixing means in the fixing portion B of the fabric for welding 1 is provided with straps U, such as those disclosed by Unexamined Patent Publication H7-207-547.

In the above examples, a welding portion A is shown on one side of the fabric for welding 1. The welding portion A can be made on both sides of the fabric for welding 1 as shown in Figure 4A, or can be made the middle part of the fabric, as shown in Figure 4B. Also, auxiliary fixing means such as straps can also be provided where desired.

In the above examples, the fabric for welding 1 has been in the form of a belt. However, if necessary, the width of the belt can be broadened, and the fixing portion can be extended to that it may completely replace the substrate S. The fabric for welding with an extended fixing portion can be welded with another fabric for welding, as shown in Figure 5.

In the examples described so far, the fabric for welding 1 has been divided into a welding portion A and a fixing portion B. However, the entire portion of the fabric for welding 1 can be made as the welding portion A. Figure 6A

illustrates a fabric for welding in which an entire welding portion A is overlapped on the fringe of a substrate S. Optionally, holes (not illustrated) can be bored in this welding portion.

Figure 6B provides another example where the fabric for welding is connected with two substrates S.

Figures 7A-C illustrate some three-dimensionally woven fabrics for welding 1. Figure 7A shows an example where two welding portions A are branched from the middle line of a belt-form fixing portion B. Figure 7B shows an example where two welding portions A are each branched from a line just apart from the middle line of a fixing portion B. Figure 7C illustrates an examples wherein one welding portion A is branched from the middle line of belt-form fixing portion B.

Figure 8A-C illustrate other varieties of three-dimensional fabrics or welding 3. Figure 8A shows a case in which two welding portions A are branched from one edge of a belt-form fixing portion B. Figure 8B shows a case in which two fixing portions B are connected edge-to-edge with each other, and two welding portions A are branched therefrom. Figure 8C illustrates a case in which two fixing portions B are connected edge-to-edge with each other, and a single welding portion A is branched therefrom. The three-dimensional weaves in Figures 8B and 8C have the same basic construction as those shown in Figure 7A and Figure 7C, respectively, but they differ in the mode of the weave. The weave compositions of the three-dimensional

fabrics in Figures 7A-c and Figures 8A-C are described in detail in the specification of Japanese Patent Application H8-91782.

In a fabric for welding according to the present invention, the fabric has a welding portion and a fixing portion thereon. The welding portion uses at least a warp or a weft coated with a thermoplastic material, or a warp or a weft comprising a fiber coating with a thermoplastic material. Therefore, the fabric for welding of the present invention can be used for easy and perfect welding to substrates.

The foregoing description of the specific embodiments will so fully reveal the general nature of the invention that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific embodiments without undue experimentation and without departing from the generic concept, and, therefore, such adaptations and modifications should and are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation. The means, materials, and steps for carrying out various disclosed functions may take a variety of alternative forms without departing from the invention.

Thus the expressions "means to..." and "means for...", or any method step language, as may be found in the specification above and/or in the claims below, followed by a functional statement, are intended to define and cover whatever

structural, physical, chemical or electrical element or structure, or whatever method step, which may now or in the future exist which carries out the recited function, whether or not precisely equivalent to the embodiment or embodiments disclosed in the specification above, i.e., other means or steps for carrying out the same function can be used; and it is intended that such expressions be given their broadest interpretation.

All patents and other references cited herein are hereby incorporated by reference in their entirety.

Figure References

1 fabric for welding
1a warp
1b weft
1c edge thread
2 fabric for welding
3 fabric for welding
A welding portion
B fixing portion
C coated part
H hole
S substrate
T belt-form fabric
t coarsely woven part
U strap

WHAT IS CLAIMED IS:

1. A fabric for welding comprising a fabric having at least one welding portion, said at least one welding portion comprising a portion of the fabric which includes a material which melts under hot pressing conditions to weld the fabric to a substrate.

2. A fabric for welding according to claim 1, wherein said welding portion extends across the entire width of the fabric.

3. A fabric for welding according to claim 1, wherein said at least one welding portion extends across part of the width of the fabric.

4. A welding fabric according to claim 1, wherein said welding portion comprises a warp coated with a thermoplastic material.

5. A welding fabric according to claim 1, wherein said welding portion comprises a warp made of fibers coated with a thermoplastic material.

6. A fabric for welding according to claim 1, wherein said fabric also includes at least one fixing portion.

7. A fabric for welding according to claim 6, wherein said at least one welding portion is at each end of said fabric.

8. A fabric for welding according to claim 6, wherein said welding portion is in the middle portion of said fabric.

9. A welding fabric according to claim 6 comprising two fixing portions connected edge-to-edge with each other.

10. A welding fabric according to claim 6 comprising two welding portions and said two welding portions are attached to the fixing portion so that the two welding portions depend from said fixing portion.

11. A welding fabric according to claim 10, wherein said two welding portions are attached to the middle of said fixing portion.

12. A welding fabric according to claim 10, wherein said two welding portions are branched from one edge of said fixing portion.

ABSTRACT OF THE DISCLOSURE

A fabric for welding is provided which has a welding portion integral with the fabric which extends partially or completely over the width of the fabric. The welding portion of the fabric comprises at least a warp or weft which melts under hot pressing to adhere the fabric to a substrate. The substrate may be a cloth sheet, a synthetic resin sheet, or the like. This enables one to attach the sheet to a column, a stake, a log, a building, a footing, etc., or to attach the welding fabric to another sheet.

FIGURE 1

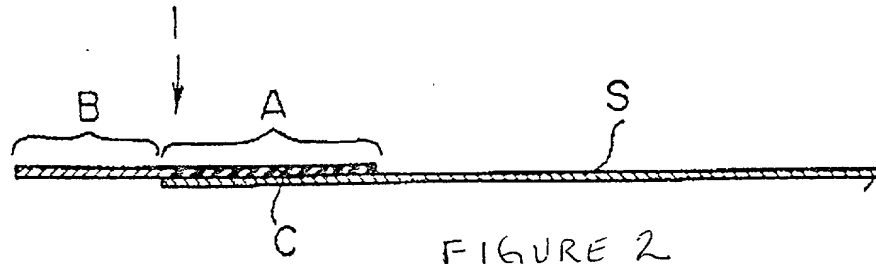


FIGURE 2

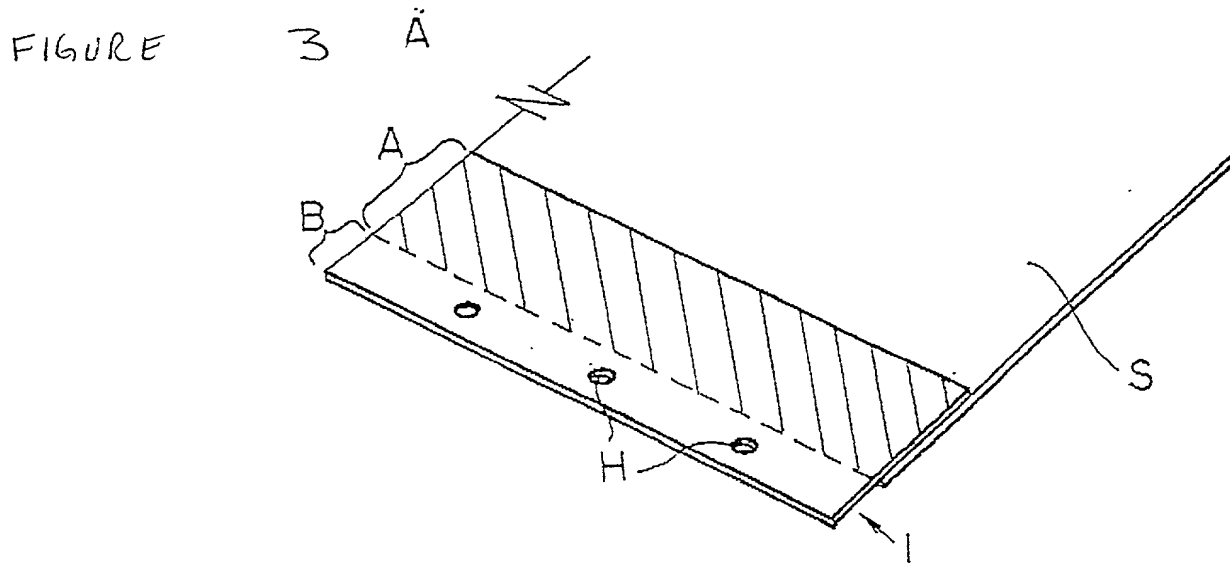


FIGURE 3 B

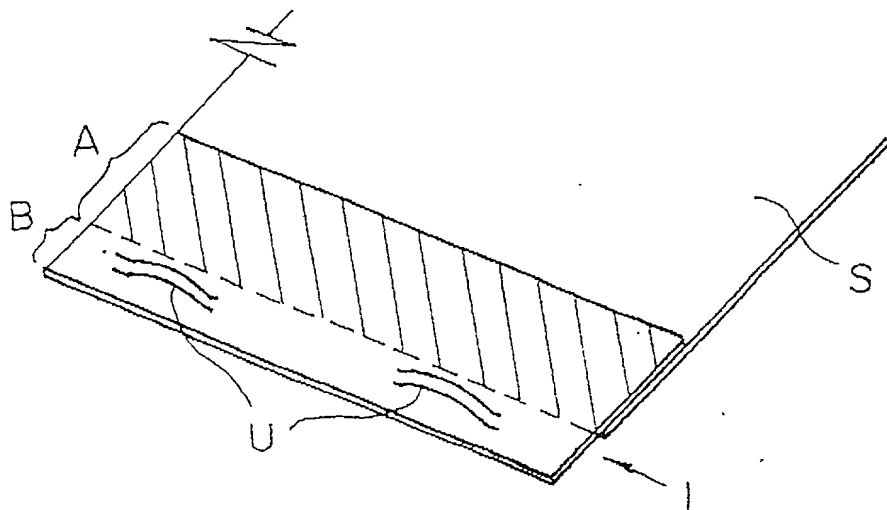


FIGURE 4 A

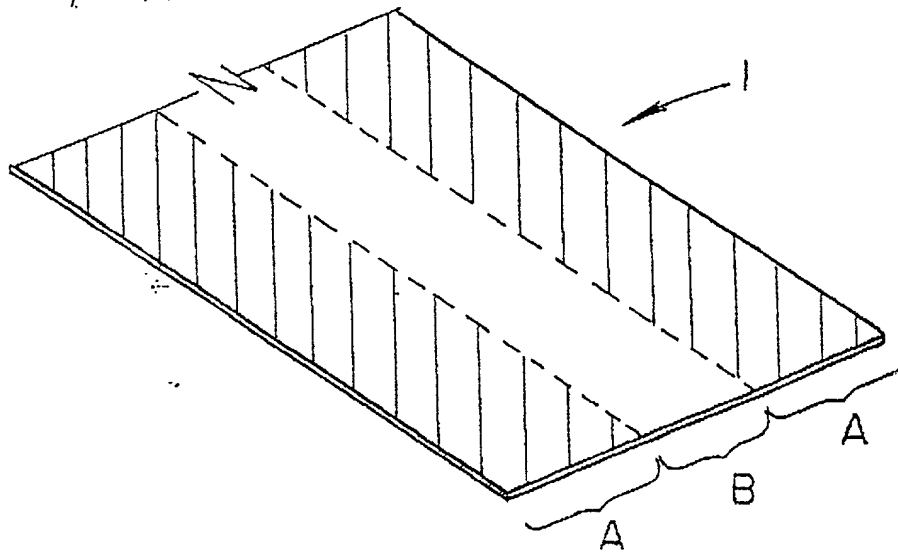
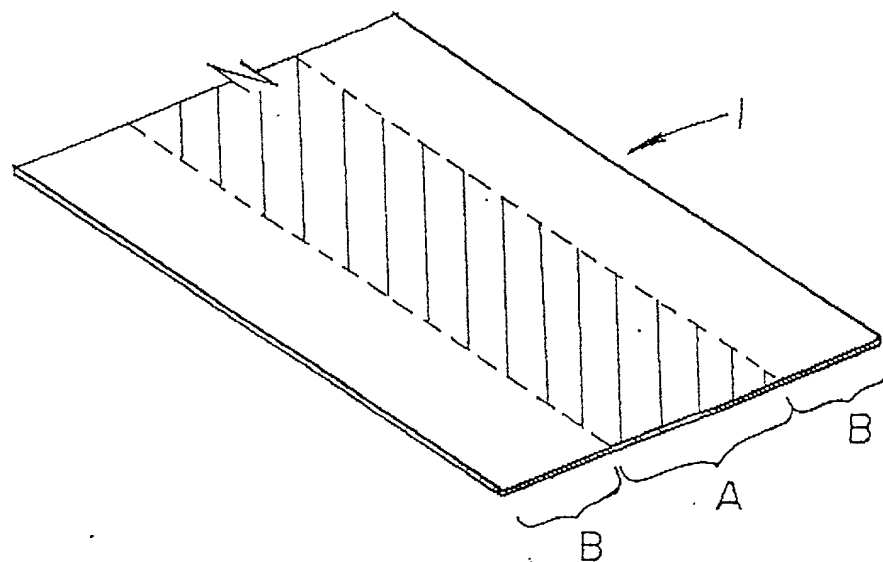


FIGURE 4 B



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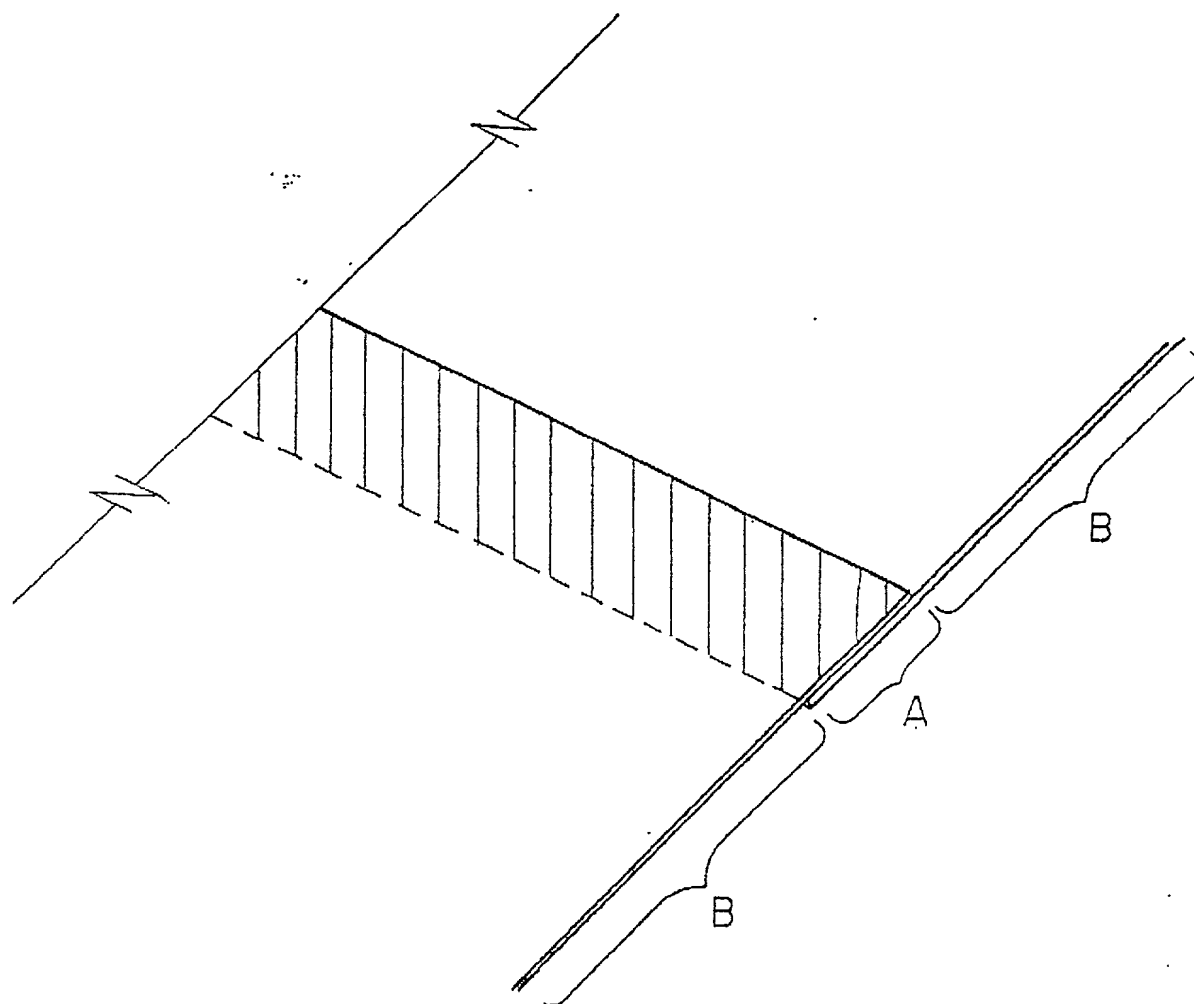


FIGURE 5

FIGURE 6 A

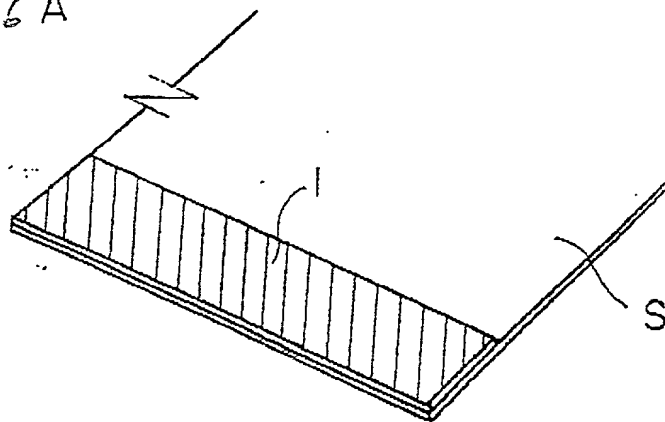


FIGURE 6 B

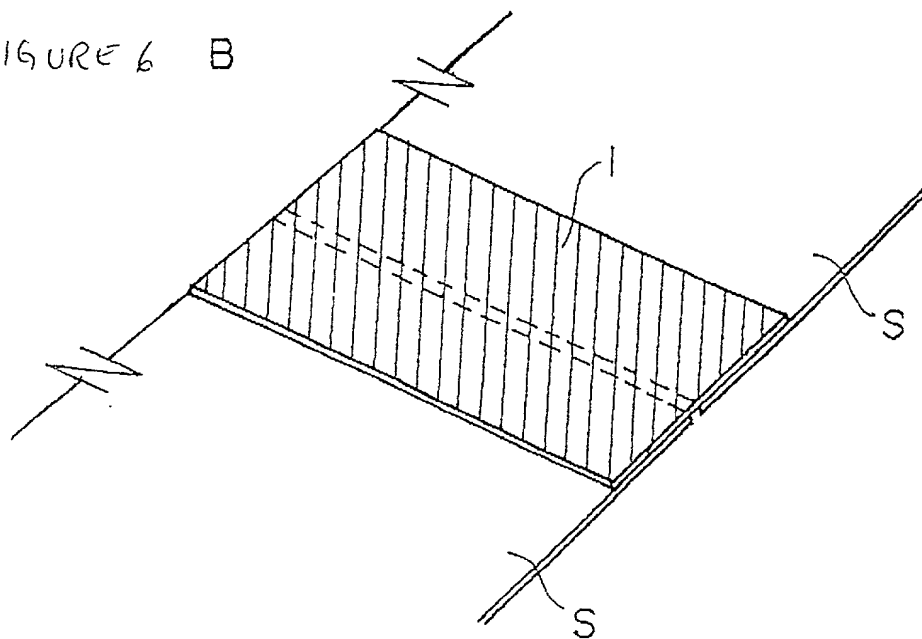


FIGURE 7 A

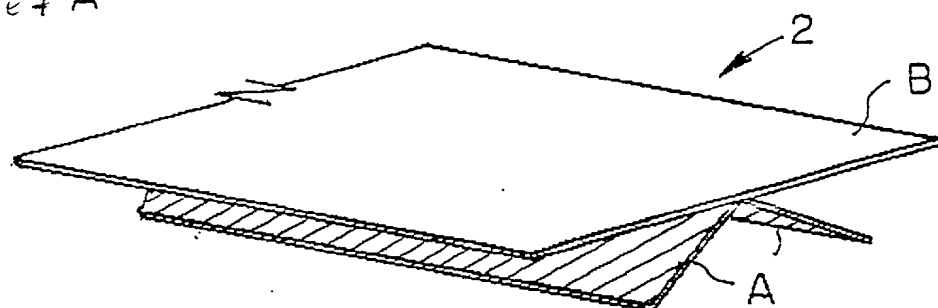


FIGURE 7 B

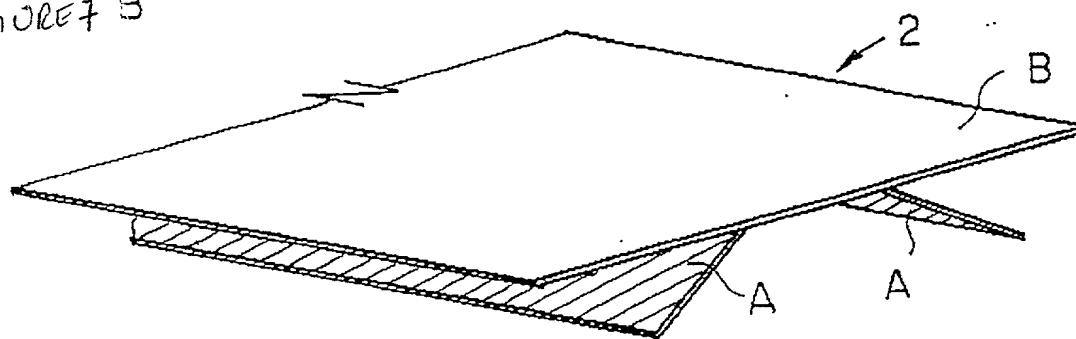


FIGURE 7 C

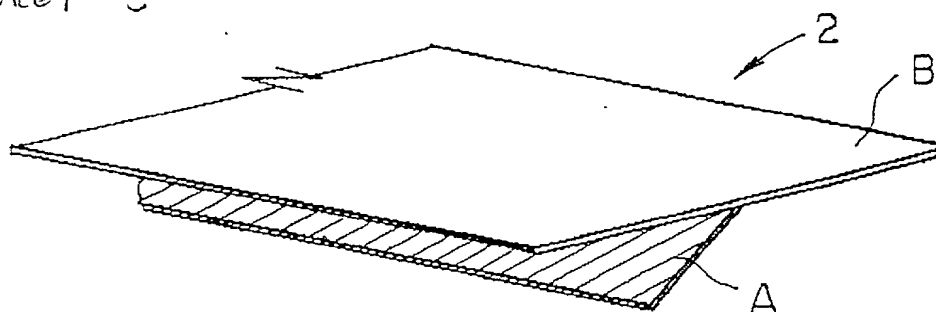


FIGURE 8 A

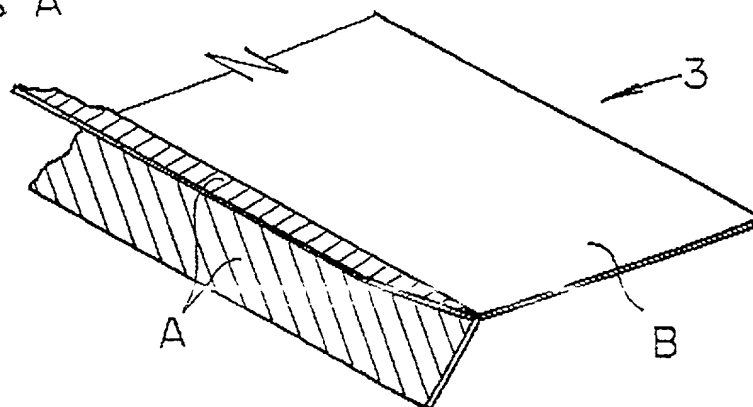


FIGURE 8 B

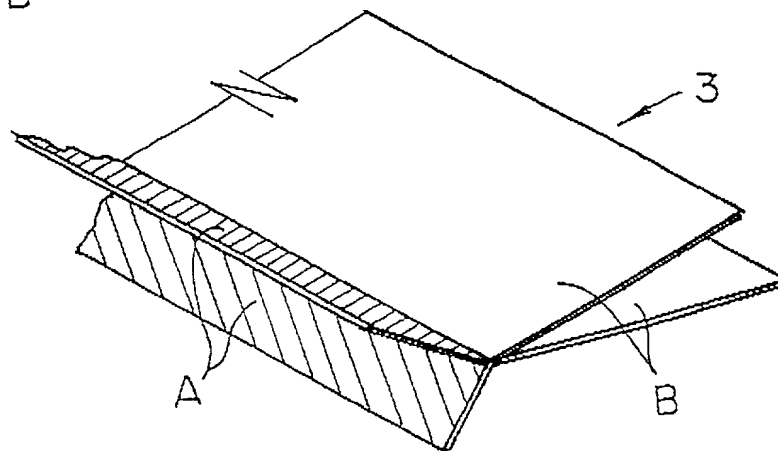


FIGURE 8 C

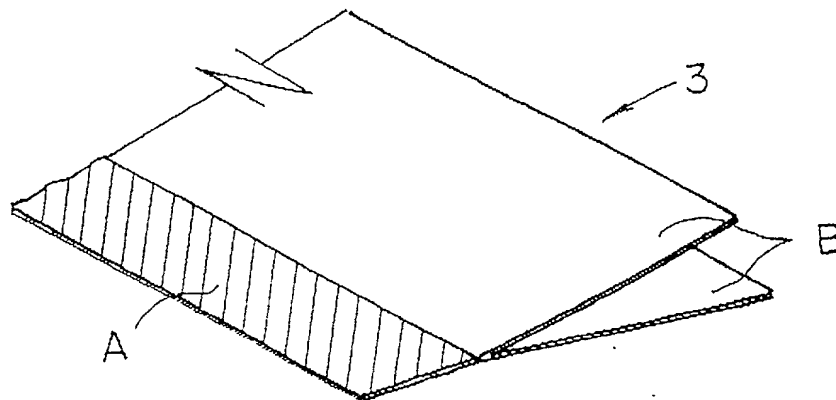


FIGURE 9 A.

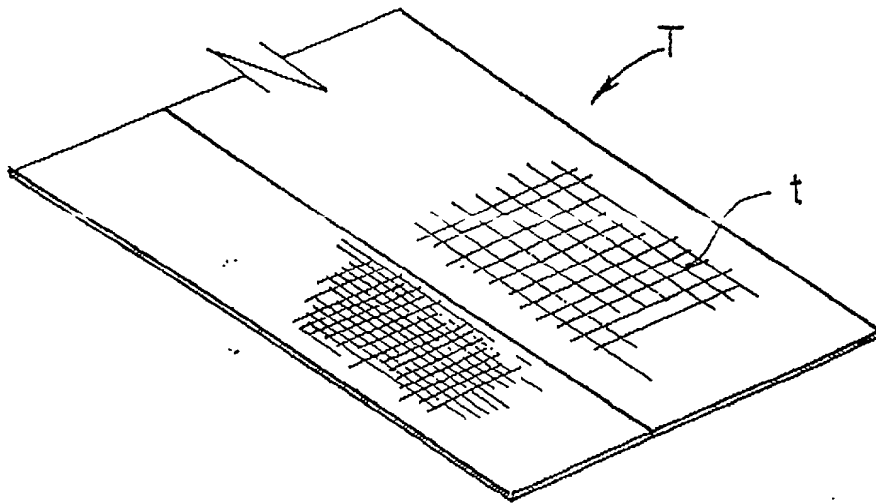
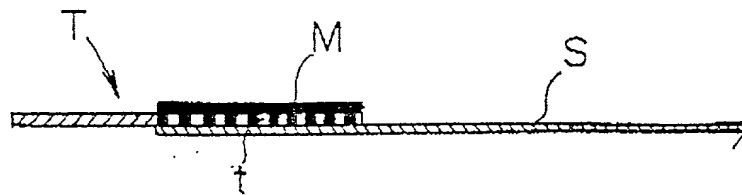


FIGURE 9 B



Page 1 of 2☒ Original ☐ Supplemental

Atty.Docket: KIKUCHI=2

Combined Declaration for Patent Application and Power of Attorney

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; and that I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

A FABRIC FOR WELDING

the specification of which (check one)

☒ [XX] is attached hereto;☐ [] was filed in the United States under 35 U.S.C. §111 on _____, as USSN _____*, or☐ [] was/will be filed in the U.S. under 35 U.S.C. §371 by entry into the U.S. national stage of an international (PCT) application, PCT/_____; filed _____, entry requested on _____*; national stage application received USSN _____*; §371/§102(e) date _____* (*if known),

and was amended on _____ (if applicable).

(include dates of amendments under PCT Art. 19 and 34 if PCT)

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above; and I acknowledge the duty to disclose to the Patent and Trademark Office (PTO) all information known by me to be material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. §§ 119, 365 of any prior foreign application(s) for patent or inventor's certificate, or prior PCT application(s) designating a country other than the U.S., listed below with the "Yes" box checked and have also identified below any such application having a filing date before that of the application on which priority is claimed:

(Number)	(Country)	(Day Month Year Filed)	<input type="checkbox"/> []	<input type="checkbox"/> []
			YES	NO
(Number)	(Country)	(Day Month Year Filed)	<input type="checkbox"/> []	<input type="checkbox"/> []
			YES	NO
(Number)	(Country)	(Day Month Year Filed)	<input type="checkbox"/> []	<input type="checkbox"/> []
			YES	NO

I hereby claim the benefit under 35 U.S.C. § 120 of any prior U.S. non-provisional Application(s) or prior PCT Application(s) designating the U.S. listed below, or under § 119(e) of any prior U.S. provisional applications listed below, and, insofar as the subject matter of each of the claims of this application is not disclosed in such U.S. or PCT application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose to the PTO all information as defined in 37 C.F.R. §1.56(a) which occurred between the filing date of the prior application and the national filing date of this application:

(Application Serial No.)	(Day Month Year Filed)	(Status: patented, pending, abandoned)
(Application Serial No.)	(Day Month Year Filed)	(Status: patented, pending, abandoned)

I hereby appoint the following attorneys, with full power of substitution, association, and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

SHERIDAN NEIMARK, REG. NO. 20,520 - ROGER L. BROWDY, REG. NO. 25,618 - ANNE M. KORNBAU, REG. NO. 25,884
 NORMAN J. LATKER, REG. NO. 19,963 - IVER P. COOPER, REG. NO. 28,005 - ALLEN C. YUN, REG. NO. 37,971*
 NICK S. BRONER, REG. NO. 33,478 - * Patent Agent

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The undersigned hereby authorizes the U.S. Attorneys or Agents named herein to accept and follow instructions from SANWA LAW AND PATENT OFFICES as to any action to be taken in the U.S. Patent and Trademark Office regarding this application without direct communication between the U.S. Attorney or Agent and the undersigned. In the event of a change of the persons from whom instructions may be taken, the U.S. Attorneys or Agents named herein will be so notified by the undersigned.

Page 2 of 2

Atty.Docket: KIKUCHI=2

Title: A FABRIC FOR WELDING

U.S. Application filed _____, Serial No. _____

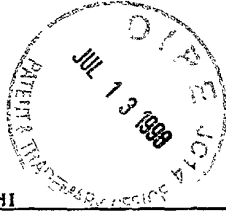
PCT Application filed _____, Serial No. _____

I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF FIRST INVENTOR Yuzo KIKUCHI		INVENTOR'S SIGNATURE <i>Yuzo Kikuchi</i>	DATE Feb. 23, 1988
RESIDENCE 1-15-19 KYODO SETAGAYA-KU, TOKYO, JAPAN		CITIZENSHIP JAPANESE	
POST OFFICE ADDRESS			
FULL NAME OF SECOND JOINT INVENTOR		INVENTOR'S SIGNATURE	DATE
RESIDENCE		CITIZENSHIP	
POST OFFICE ADDRESS			
FULL NAME OF THIRD JOINT INVENTOR		INVENTOR'S SIGNATURE	DATE
RESIDENCE		CITIZENSHIP	
POST OFFICE ADDRESS			
FULL NAME OF FOURTH JOINT INVENTOR		INVENTOR'S SIGNATURE	DATE
RESIDENCE		CITIZENSHIP	
POST OFFICE ADDRESS			
FULL NAME OF FIFTH JOINT INVENTOR		INVENTOR'S SIGNATURE	DATE
RESIDENCE		CITIZENSHIP	
POST OFFICE ADDRESS			
FULL NAME OF SIXTH JOINT INVENTOR		INVENTOR'S SIGNATURE	DATE
RESIDENCE		CITIZENSHIP	
POST OFFICE ADDRESS			
FULL NAME OF SEVENTH JOINT INVENTOR		INVENTOR'S SIGNATURE	DATE
RESIDENCE		CITIZENSHIP	
POST OFFICE ADDRESS			

ALL INVENTORS MUST REVIEW APPLICATION AND DECLARATION BEFORE SIGNING. ALL ALTERATIONS MUST BE INITIALED AND DATED BY ALL INVENTORS PRIOR TO EXECUTION. NO ALTERATIONS CAN BE MADE AFTER THE DECLARATION IS SIGNED. ALL PAGES OF DECLARATION MUST BE SEEN BY ALL INVENTORS.

RECEIVED 5066050



Applicant or Patentee: YUZO KIKUCHI Attorney's Docket No.: KIKUCHI=2
 Appln. or Patent No.: _____ Filed or Issued: _____
 For: A FABRIC FOR WELDING

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL BUSINESS ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

☐ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN KABUSHIKI KAISHA ORUSEN
 ADDRESS OF SMALL BUSINESS CONCERN 7-18-28 Thukiji Chuo-ku, Tokyo, Japan

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled A FABRIC FOR WELDING by inventor YUZO KIKUCHI described in:

☒ the specification filed herewith with title listed as above.

☐ application no. _____, filed _____.

☐ patent no. _____, issued _____.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

*Note: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities (37 CFR 1.27).

NAME KABUSHIKI KAISHA MATHUI TAPE KOUGYOUSHO
 ADDRESS 13-5 Shiohira-cho, Hamamatsu-shi, Shizuoka-ken, Japan

☐ INDIVIDUAL ☒ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

NAME _____
 ADDRESS _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

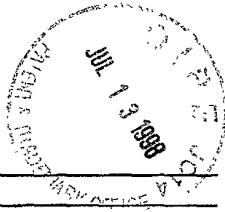
I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING YUZO KIKUCHI
 TITLE OF PERSON SIGNING OTHER THAN OWNER _____
 ADDRESS OF PERSON SIGNING 1-15-17 KYODO, SETAGAYA-KU, TOKYO, JAPAN

SIGNATURE Yuzo Kikuchi DATE Feb. 22, 1998

RECEIVED "060309"



Applicant or Patentee: YUZO KIKUCHI

Attorney's Docket No.: XIKUCHI=2

Appln. or Patent No.:

Filed or Issued:

For: A FABRIC FOR WELDING

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL BUSINESS ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN**

I hereby declare that I am

[] the owner of the small business concern identified below:

[XX] an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN KABUSHIKI KAISHA MATHUI TAPE KOUGYOUSHO

ADDRESS OF SMALL BUSINESS CONCERN 13-5 Shogen-cho, Hamamathu-shi, Shizuoka-ken, Japan

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled A FABRIC FOR WELDING by inventor Yuzo KIKUCHI described in:

[XX] the specification filed herewith with title listed as above.

[] application no. _____, filed _____

[] patent no. _____, issued _____

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

*Note: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities (37 CFR 1.27).

NAME KABUSHIKI KAISHA ORUSEN

ADDRESS 7-18-28 Thukiji Chuo-ku, Tokyo, Japan

[] INDIVIDUAL [XX] SMALL BUSINESS CONCERN [] NONPROFIT ORGANIZATION

NAME

ADDRESS

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Takeo MATHUI

TITLE OF PERSON SIGNING OTHER THAN OWNER

ADDRESS OF PERSON SIGNING 13-5 shogen-cho, Hamamatsu-shi, Shizuoka-ken, Japan

SIGNATURE

Takeo Mathui

DATE _____

February 25, 1998